

energy based on one or more rules regarding a state of charge or other energy parameters of either device.

[0057] At 704, energy transfer device 100 detects a first connection of a first portable device. At 706, energy transfer device 100 detects a second connection of a second portable device. At 708, energy transfer device transfers energy between the first and second portable devices based at least on the first energy transfer parameter.

[0058] FIG. 8 illustrates energy transfer device 800 according to another embodiment. Energy transfer device 800 is operatively coupled to first portable device 114 and second portable device 116 to wirelessly transfer energy therebetween. Energy transfer device 800 operates similarly to energy transfer device 100 of FIG. 1, except energy transfer device 800 transfers energy via wireless signals whereas energy transfer device 100 of FIG. 1 transfers energy via cable 102. Energy transfer device 800 can use any of various wireless charging technologies, such as induction-based wireless charging, resonance-based wireless charging, radio-based wireless charging, and/or optically-based wireless charging, among others. In one embodiment, energy transfer device 800 is incorporated into a table-top to facilitate energy transfer between devices placed thereon. Energy transfer device 800 also includes control unit 802 to control parameters associated with energy transferred from a host device (e.g., first portable device 114) to a recipient device (e.g., second portable device 116). Control unit 802 may include any of the features of control unit 108 discussed elsewhere herein.

[0059] FIG. 9 illustrates energy transfer device 900 according to another embodiment. Energy transfer device 900 is operatively coupled to second portable device 116 via cable 902. Energy transfer device 900 operates similarly to energy transfer device 100 of FIG. 1, except energy transfer device 900 transmits and/or receives energy from a single device, whereas energy transfer device 100 of FIG. 1 transfers energy between two devices. Energy transfer device 900 includes control unit 904 to control parameters associated with energy transferred between energy transfer device 900 and second portable device 116. Control unit 904 includes internal battery 906, which may be larger than internal battery 120 of second portable device 116. For example, in one embodiment, internal battery 906 is about 3,000-30,000 mAh, whereas internal battery 120 of second portable device 116 is about 1,400-2,400 mAh. In an embodiment, internal battery 906 can be charged from an AC (alternating current) power source (e.g., a wall outlet) via cable 902 and an AC adapter (not shown). Control unit 902 may include any of the features of control unit 108 discussed elsewhere herein.

[0060] FIG. 10 is a flow diagram of a method 1000 of transferring energy from an energy transfer device, according to one embodiment. For illustrative purposes, FIG. 10 will be described in connection with energy transfer device 100 of FIGS. 1 and 2. However, the method 1000 can be performed by other devices, according to other embodiments.

[0061] At 1002, a connection of energy transfer device 100 to first portable device 114 is detected. For example, according to one embodiment, first portable device 114 detects first connector 104 being connected to a port of first portable device 114.

[0062] At 1004, a request for energy is received at first portable device 114 from energy transfer device 100. Energy transfer device 100 is also connected to second portable

device 116, for example, via second connector 106. In one embodiment, second portable device 116 may transmit a request for energy to energy transfer device 100 and, based on the request from second portable device 116, energy transfer device 100 may transmit a corresponding request for energy to first portable device 114. For example, second portable device 116 may be running low on energy, and may request that first portable device 114 transfers some of its energy to second portable device 116, via energy transfer device 100.

[0063] At least one of first and second portable devices 114, 116 may provide certain information to energy transfer device 100 upon connection thereto, or in response to a query. For example, in one embodiment at least one of first and second energy transfer devices 114, 116 may provide at least one of an identifier, an energy parameter, an energy transfer parameter, or other information to energy transfer device 100. In addition, upon detecting the other of first and second portable devices 114, 116, energy transfer device 100 may transmit the information received to the respective device.

[0064] At 1006, it is determined whether to authorize the request. In some embodiments, the determination 1006 is made by energy transfer device 100, while in other embodiments, the determination 1006 is made by first portable device 114. The determination may be made based upon various factors. For example, the determination may be made based on the information (e.g., identifier, energy parameter, energy transfer parameter, etc.) mentioned above, upon a payment associated with the energy transfer, or upon other things.

[0065] At 1008, energy is transmitted from first portable device 114 to energy transfer device 100 if determination 1006 results in the request being approved. For example, in one embodiment, energy is further transmitted to second portable device 116 from energy transfer device 100. In another embodiment, at least a portion of the energy is stored by energy transfer device 100. In one embodiment, energy transfer is stopped when energy transfer is complete. For example, according to various embodiments, energy transfer may be considered complete when the requested amount of energy is transferred to second portable device 116 from first portable device 114, when first portable device 114 reaches a predetermined minimum state of charge, when second portable device 116 reaches a predetermined maximum state of charge, when a time limit is reached, when first portable device 114 no longer has energy to transfer, and/or if one of first and second portable devices 114, 116 is disconnected from energy transfer device 100, among other events. In some embodiments, the amount of energy transferred from first portable device 114 to energy transfer device 100 is less than the amount requested at 1004. For example, due to one of the reasons mentioned above, energy transfer may be stopped prior to the requested amount of energy being transmitted. In some embodiments, portable device 116 may provide or authorize a payment associated with the energy transfer from portable device 114. Payment may be made electronically, with the amount being debited from an account controlled by second portable device 116 or an owner or agent thereof. The account may reside on second portable device 116, on energy transfer device 100, or an external site. The payment amount may be credited to an account controlled by first portable device 114 or an owner